



World Chronicle

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AFRICA

Water is vital for the life and health of people and ecosystems, but around the world women and men lack access to adequate and safe water to meet their most basic needs. Water resources, and the ecosystems that provide them, are under threat from pollution, overuse, land use changes and many other forces. How can we make sure that populations will have access to clean water in the future? In this edition of World Chronicle, Roberto Lenton, Director of the Sustainable Energy and Environment Division at the United Nations Development Programme, discusses how the water crisis can best be dealt with.

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ANNOUNCER: From United Nations Headquarters in New York, this is World Chronicle, an unedited interview programme about major global issues.

Here now to introduce our guest is the host of today's World Chronicle.

LITTLEJOHNS: I'm Michael Littlejohns, and this is World Chronicle.

One of the greatest challenges facing us all is water security. Water is a basic human need, vital for life and health. As the world population increases, the demand for water keeps rising while the quality continues to deteriorate. Water scarcity affects many nations, and access to clean drinking and sanitation remains poor. Around 1.2 billion people, or one in five, do not have access to adequate and safe drinking water. Each year, between three and four million people, including more than two million children, die directly from the effects of water-borne diseases. Can this crisis be dealt with in time?

Our guest today is an expert on water issues. He is Roberto Lenton, Director of the Sustainable Energy and Environment Division at UNDP, the United Nations Development Programme. Joining me to talk with Mr. Lenton are Jack Freeman of *The Earth Times* and Robert Holloway of *Agence France Presse/AFP*.

Mr. Lenton, welcome to World Chronicle.

LENTON: Thank you.

LITTLEJOHNS: Mr. Lenton, we have been constantly reading that water is more valuable than oil and in fact bottled water in the supermarkets in New York is in fact somewhat more expensive than gasoline, despite the increase in the price, which has caused a lot of dissatisfaction among American consumers. But how serious is the water crisis? We have tossed out some numbers about the number of people affected and so forth how serious worldwide is the crisis and what can be done to cope with it?

LENTON: Well, it certainly is serious and getting more serious by the day. On the one side there's the water quantity problem that the amount of water that we have available for human consumption around the world is constant and the population is increasing and the amount of water required by each human being on earth is increasing also because of a variety of factors. So we certainly have a scarcity situation that supply and demand are increasingly less in synch. But in my view the crisis that we are facing is less a problem of scarcity and much more a crisis of governance, a crisis of management. It's not that the world is running out of water necessarily that is

the crisis but the way in which we are managing water is so poor that that itself is the problem that we face.

LITTLEJOHNS: But I mean water companies are utilities in the United States at any rate – I suppose in many other developed countries – yet they are not a particularly good investment. I can speak from personal experience. I'm an investor in a water company and it has been performing terribly. Why is it that water companies are not attracting more attention and becoming more profitable?

LENTON: Well, you're absolutely right that water services at the present time – water utilities – are much less attractive to investors than say telecommunications or energy. and that is, I think, in part because traditionally the water utilities – drinking water – have been primarily in the government sector. And it's only in recent years that we have seen a privatization and a turning over to private companies.

LITTLEJOHNS: Is that a good thing to turn them over to private companies?

LENTON: If there is a strong regulatory framework, yes. Let me tell you why I think that is so. If you turn it over to the private sector without a strong regulatory framework you might find yourself in the position that poor people; the marginalized people in the mega cities in the developing world would simply be priced out. And so you have to have a strong regulatory framework. But the current situation of government services heavily subsidized isn't working either because in many countries what you find in many cities is that subsidized water services are providing water to the rich and the middle classes and not providing water to the poor who, therefore, have to get water from vendors at exorbitant rates. So that's not working either.

FREEMAN: Now Mr. Lenton the problem of subsidies has been brought up very often in environmental circles in the past dealing with energy and yet it's the one area of environmental change that seems to be the most intractable because after all these subsidies are decided in many cases by democratic governments. How can you deal with this? How can we change this?

LENTON: First I'd like to agree with you. The question of perverse subsidy is a major environmental problem and it affects energy but it also affects water. And the water sector, whether we are talking about water for drinking purposes or water for irrigation is, very, very heavily subsidized. The issue is not necessarily to remove subsidies entirely, because you have to have some subsidization if you're going to address the needs of the

poor, but it's really to change the framework. You've got to have full-cost pricing for those uses of water -- for the bulk of the uses of water -- and have to have some way of providing water at affordable rates to the poor.

FREEMAN: Do international meetings like the one that was held in March in The Hague have any impact on these things?

LENTON: I think they have brought the issue of the role of the private sector and the question of the pricing to the fore. One of the interesting things about the Second World Water Forum in The Hague, was that the issues of privatization, the issues of pricing were really right on the table and maybe to some extent they brought others. But nevertheless they have really been very, very useful in bringing these questions to the attention of the public and to the formal debate.

HOLLOWAY: It was said in the introduction to this programme that a very large number of people in the world, more than a billion people, don't have clean drinking water. The 1990's, I think, was the UN's International Decade of Drinking Water Supply and Sanitation and then there was the Water Forum in Marrakech in '97. What sort of improvement and progress has been made since then?

LENTON: Well in absolute numbers there has been a considerable improvement throughout the Water Decade and beyond. The problem of course is simply catching up because with population expansion the absolute numbers of people that remain unserved is at the level that we said earlier of 1.2 billion. So there's a tremendous catch up job that is required. So by no means should one say that the Water Decade was not helpful but the challenge ahead is to address the need of those 1.2 billion people. But let me add though that when we're talking about the water crisis in the short-term clearly we're focussing on the questions of water supply and drinking and sanitation. But it's much beyond that because the questions that we face in relation to water for food, water for industry, questions of flood control, those are also part of the water equation that have to be taken into account.

LITTLEJOHNS: The greatest use of water is for agriculture?

LENTON: By far. By far.

LITTLEJOHNS: And what about the problem of waste of water? I mean in this building because of rather dilapidated plumbing there's a huge waste of water. It's probably typical of any major building in the city of New York and perhaps major cities all over the

world, or minor cities when it comes to that. How serious is the problem of waste and what can be done about it?

LENTON: Waste is on the one hand a very serious problem for exactly the reasons that you characterized but at the same time it's a wonderful opportunity because eliminating that waste is a way of addressing the water scarcity situation that we were talking about earlier. But large as they may seem in an urban setting the wastages that you were talking about, the wastages in irrigation, are much greater simply because if we say that 80 percent of all the water in the world is consumed for irrigation--

LITTLEJOHNS: 80 percent?

LENTON: 80 percent. That's right. So wastage in the irrigation sector that can be as high as 50 percent. That's a huge amount of water.

FREEMAN: But agriculture has more on its conscience than just wasting water. There's destroying the quality of water and the problem of agricultural run-offs. Was that discussed at The Hague?

LENTON: Well, not as much as it should have been. The problems of agriculture in my view were not as high on the agenda in The Hague as they should have been and there isn't yet the full realization that such a huge amount of water goes into agriculture and that has to be addressed. So it's one of these huge problems that is not receiving the attention it should.

FREEMAN: To what extent is this a matter of sharing technologies? To what extent could the problems be solved or alleviated by the widespread use of drip irrigation, for example, or some of the other new techniques?

LENTON: Technology is part of the answer in my view. It's part of the answer in the sense that the use of drip irrigation and sprinkler and so on is much less widespread than it could be, especially in developing countries. But it's only part of the answer because the underlying problems tend to be problems of management, problems of policy; the environment that surrounds the use of those technologies. So much of the wastage in irrigation in fact comes as a result of these larger systemic problems.

FREEMAN: The notion of waste, I think, is not a very simple notion. Wastewater can be water which you have lost through leakage. It can also be water which is considered not as pure as would be required.

LITTLEJOHNS: Grey water for example do you mean?

FREEMAN: It's not an expression I'm familiar with but the one I was thinking of was in the rich countries at any rate we tend to insist upon drinking-quality water and use it for things like watering the lawn and so on, washing the car which wouldn't require that level of purity. Are there gains to be made there and if so how could you feasibly put into practice? Would we need three or four faucets per household?

LENTON: There is quite a lot of scope for improvement in that area. The point that you have made of using the grey water in urban settings with the right provisions that is in fact a source of new water. And generally speaking it is better to invest in recycling, conserving water than it is to investing new sources of water. But it is complex overall because there is already, especially in agricultural settings, a lot of reuse. For example the water in the Nile is considered to be reused by about a factor of ten before it reaches the sea and that's because water will go into one irrigation area. After it goes into the plants it seeps into the ground water and finds its way back to the river and then it's picked up further downstream. So the scope for reusing even further than what we have now is limited to some extent because of that. So the waste provides an opportunity but one has to look at the opportunities very carefully because so much of reuse is already taking place.

LITTLEJOHNS: This is World Chronicle. Our guest is Roberto Lenton, Director of the Sustainable Energy and Environment Division at UNDP, the United Nations Development Programme.

Mr. Lenton, parts of the world, particularly in Africa, goes from extreme drought to huge amounts of rain which causes flooding. I was in Cape Verde. For example they told me that they had had no rain for about ten years and after that, of course the rain came down in torrents and they had flooding. And Mozambique is another example. Which countries are the worst affected would you say on a sort of continuing basis? They go from one crisis to another. Either too little or too much.

LENTON: It would be hard to single out any country that does not face water problems to some extent or another and where you characterized the situation in Cape Verde and other countries really you see that across the world. But clearly the countries where the problem of water management is most at the fore is the arid countries but the arid countries of North Africa and West Asia. But I really would like to emphasize that that is not the only part of the world where you face water problems. Whenever you have these extremes of drought and flooding you are going to find water problems.

LITTLEJOHNS: Do they practice the degree of conservation that you'd like to see in these arid countries?

LENTON: I think it varies considerably. I think you have some wonderful examples of sustainable water management over centuries in some areas, such as villages in Rajasthan, that have practiced ways of harvesting the water that is more than ample to meet people's needs despite the fact that the rainfall might be 300 to 400 millimetres a year. Then you have other extremes of very, very high rainfalls – 7,000-8,000 millimetres – and yet the water is not managed well and when it does not rain you don't have water.

FREEMAN: Now, we've mentioned earlier that 1.2 billion people around the world don't have safe drinking water at the turn of the tap. An equal number, or even more I believe, don't have sanitation. Are we working on both of these problems?

LENTON: Sanitation tends to be the overlooked sister of the drinking water problem and yet the numbers, as you say, are much worse. The number of people that don't have adequate sanitation is much greater than those that don't have drinking water and when you're talking about health concerns, the issue of sanitation is equally serious.

HOLLOWAY: One of the reports says that it requires twice as much water per ton of harvest to produce rice as to produce wheat. I think that's correct. What sort of savings could be made by either switching from one kind of crop to another or from improving the nature of the crop so that it became less water demanding?

LENTON: It's the more crop per drop issue that is probably the number one challenge in irrigated agriculture and it's precisely what you say. How can you find cropping systems that are less water-intensive and how can you find ways of agricultural practices that consume less water? The potential is very significant. That, together with the kinds of technologies we were talking about earlier, is the way to move in the future in irrigated agriculture. But the question really is exactly that: in a nutshell how do you get more crop per drop? With the same amount of water how can you increase productivity? And in the end it's productivity per unit of water rather than productivity per unit of land that is going to be the dominant issue facing agriculture in the years to come.

HOLLOWAY: The figure that you used before – 80 percent of water is used for agriculture – it's a higher percentage in developing countries than in industrial countries.

LENTON: Right. That's right.

HOLLOWAY: One of recommendations to The Hague conference was to increase, between now and 2025, investment worldwide in water from 60 to 70 billion to about 180 billion dollars. Where is that 60 to 70 billion now being spent and what is it being spent on?

LENTON: The exact figures are in this report and I think as an overall rule you would say that the majority of the investment nowadays is going into drinking water and irrigated agriculture. Those are the two major uses of those resources or major draws of those resources. A smaller amount going into water for industry, water for tourism, flood control and so on and so forth. But the two big sinks are irrigated agriculture and drinking water.

LITTLEJOHNS: Mr. Lenton, water of course can be used as a weapon. There have been examples of possible use of water in that connection in the Middle East. Probably other places. Has your group addressed the problems that are raised in this connection?

LENTON: The whole question of water and peace and security was a topic discussed at some length in the World Water Forum in The Hague in March. Clearly very much on the map. President Gorbachev for example was leading one of those discussions and many other former world leaders. My personal view on that subject is although there is a lot of talk about the potential of water wars in the 21st century my sense is that there are more opportunities for water being used as a way to promote peace and cooperation than necessarily an avenue towards war.

FREEMAN: Could you give us an example of such a use of water for cooperation and peace?

LENTON: Well in Southeast Asia for example there has been a very, very productive association among the countries that are riparians of the Mekong, through the Mekong Commission. And for many, many years, it has provided a vehicle for the countries in the region to essentially get together and find peaceful ways to use the Mekong waters. And like that there are many other examples elsewhere.

HOLLOWAY: To change the subject how is global warming and other forms of climate change likely to affect the availability of fresh water for human beings?

LENTON: I guess the models give not completely accurate results in terms of how global warming would change water regimes around the world. But as a general trend the drier areas would get drier and the wetter areas would get wetter and by and large it's the

developing countries of the world that would face the more serious disruptions in their water supply. Regardless of the way in which the trend goes most countries would face serious problems in adapting to the changes in hydrology and therefore the changes in their agricultural practices and in their water supply systems that that would entail.

LITTLEJOHNS: Mr. Lenton, you spoke earlier about pricing and the need to protect the interests of the poor but would you say by and large perhaps water is under priced?

LENTON: By and large, yes. Oh absolutely. In most countries the water, whether it be for agriculture or for drinking, is charged at a fraction of what it really costs and at an even greater fraction if you take into account not only the financial costs but also the environmental costs. If you internalize the externalities. So I have absolutely no doubt that the current situation is one of severe under pricing and that's part of the reason why the resources that go into the water sector are not at the level that they should be because it's difficult to attract investors to a sector where the opportunities for returning recovering costs are so low. But in changing a situation we've got to be very, very careful that we take into account the need to ensure that everybody has access to water in an affordable fashion.

LITTLEJOHNS: So it should be subsidies for the poor perhaps?

LENTON: Especially for drinking water.

FREEMAN: One of the basic technologies in dealing with water problems of all sorts is to build dams which are, of course, highly controversial among environmentalists. Was anything said in The Hague about dam building?

LENTON: A little bit muted the debate in part because the questions of privatization and pricing were dominant but I think also in part because over the last couple of years there has been a very, very promising development and that is the World Commission on Dams. And the World Commission on Dams is an initiative essentially of the World Bank and IUCN bringing together people from all parts of the debate.

LITTLEJOHNS: What was that? IUCN, what is that?

LENTON: IUCN is the International Union for the Conservation of Nature based in Geneva, in Switzerland. And a very, very positive initiative bringing together people from opposite sides of the debate to try to come up with a consensus on how and under what conditions dams could be built or not be built. And they are expected to come out with their report later this year. So my sense is that in The Hague most people were looking to

the results of that Commission before pronouncing – the Commission incidentally did have a day session on the subject of dams.

HOLLOWAY: You said at the very beginning that the challenge was one of governance. I believe that in some parts of Europe that changes have been made to the administration and in France they talk about water parliaments or river parliaments. Could you give us some information about that and could that be a model to be used in other countries?

LENTON: Variance could be a model. I think the important thing in water is that you've got to find a way to involve all stakeholders in decision-making. Traditionally, that has not happened that you have decisions for example on dams being built without the involvement of those who would have to be relocated as a result of the dams. So models that involve real active participation of those who are affected by the decision-making are the way to go and water parliaments are one example of that. The whole question of involvement of stakeholders is now pretty much accepted within the international community as a prerequisite for sustainable water management.

LITTLEJOHNS: Mr. Lenton, we are "dam" well out of time. (Laughs) That's all the time we have. Thank you for being with us on this edition of World Chronicle.

Our guest has been Roberto Lenton, Director of the Sustainable Energy and Environment Division at UNDP, the United Nations Development Programme. He was interviewed by Jack Freeman of *The Earth Times* and Robert Holloway of *Agence France Presse/AFP*.

I'm Michael Littlejohns. Thank you for joining us. We invite you to be with us for the next edition of World Chronicle.

ANNOUNCER: Transcripts of the programme may be obtained free of charge by sending a stamped, self-addressed envelope to **World Chronicle**, United Nations, Room S-827L, New York, N.Y., 10017.

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